

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001661**Date Inspected:** 10-Mar-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai,China

CWI Name:	Zhang Zhong	CWI Present:	Yes	No
Inspected CWI report:	Yes No N/A	Rod Oven in Use:	Yes No N/A	
Electrode to specification:	Yes No N/A	Weld Procedures Followed:	Yes No N/A	
Qualified Welders:	Yes No N/A	Verified Joint Fit-up:	Yes No N/A	
Approved Drawings:	Yes No N/A	Approved WPS:	Yes No N/A	
		Delayed / Cancelled:	Yes No N/A	
Bridge No:	34-0006	Component:	OBG	

Summary of Items Observed:

Caltrans Quality Assurance (QA) Inspector Tim McClendon arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China to periodically monitor welding and Quality Control (QC) functions. While on site the QA Inspector observed and/or discovered the following.

Caltrans QA Inspector McClendon observed the Production Monitoring Test number 1 for Production Panel DP042-001 and DP038-001 closed rib welds in Bay #1. ZPMC welding personnel performed Gantry Machine Gas Metal Arc Welding (GMAW) for the root pass using gantry machine 1. Dual process WPS-B-T-2342-U1 (U-rib)-3 was posted as the Welding procedure specification for closed rib welding. The following weld joint and welder were recorded for the PMT, weld joint (wj) # 1 Mr. Chen Jie, wj # 2 Mr. Xang Jie, wj # 3 Mr. Gao Xin Dong, wj # 4 Mr. Song Xin Shu, wj # 5 Mr. Zhang Sheo Hai and wj # 6 Mr. Xiang Huan Feng. Welding operator was Mr. Ban Xiao Hui. The following welding variables of the PMT were recorded, amperage 352 to 366 voltage 30.2 to 31.0 with a travel speed of 524 mm/min.

The ambient temperature in bay # 1 was recorded at 11 degrees Celsius with the production panel temperature recorded at 19 degrees Celsius prior to welding.

After completion of the PMT GMAW pass, ZPMC personnel performed the GMAW pass on Production Panel DP042-001. The following welders were observed welding production deck plate u-ribs welds, Mr. Chen Jie wj-1, Mr. Xang Jie wj- 2, Mr. Gao Xin Dong wj-3 and 5, Mr. Song Xin Shu wj 4 and , Mr. Zhang Sheo Hai wj-7 and Mr. Xiang Huan Feng wj-8. The following welding variables of production panel U-ribs were recorded, amperage 344 to 374, voltage 30.3 to 31.4 with a travel speed of 529 mm/min.

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After completion of the GMAW pass on Production Panel DP042-001, ZPMC personnel performed the GMAW pass on DP038-001. The following welders were observed welding production deck plate u-ribs welds, Mr. Chen Jie wj-8, Mr. Xang Jie wj- 7, Mr. Gao Xin Dong wj- 6 and 4, Mr. Song Xin Shu wj 5 and 3, Mr. Zhang Sheo Hai wj-2 and Mr. Xiang Huan Feng wj-1. The following welding variables of production panel U-ribs were recorded, amperage 351 to 363, voltage 30.5 to 31.2 with a travel speed of 524mm/min. ZPMC performed GMAW on DP042-001 before completing SAW on the PMT. An incident report was issued for the above mentioned anomaly.

After completion of the GMAW pass on Production Panel DP042-001 and DP038-001 Caltrans QA Inspector McClendon observed the Production Monitoring Test number 1 for Production Panel DP042-001 and DP038-001 closed rib welds in Bay #1. ZPMC welding personnel performed Gantry Machine Submerged Arc Welding (SAW) for the final pass using gantry machine 1. Dual process WPS-B-T-2342-U1 (U-rib)-3 was posted as the Welding procedure specification for closed rib welding. The following weld joint and welder were recorded for the PMT, weld joint (wj) # 1 Mr. Chen Jie, wj # 2 Mr. Xang Jie, wj # 3 Mr. Gao Xin Dong, wj # 4 Mr. Song Xin Shu, wj # 5 Mr. Zhang Sheo Hai and wj # 6 Mr. Xiang Huan Feng. Welding operator was Mr. Ban Xiao Hui. The following welding variables of the PMT were recorded, amperage 675 to 682 voltage 24.2 to 25.3 with a travel speed of 515 mm/min.

After completion of the PMT SAW pass, ZPMC personnel performed the SAW pass on Production Panel DP042-001. The following welders were observed welding production deck plate u-ribs welds Mr. Chen Jie wj-1, Mr. Xang Jie wj- 2, Mr. Gao Xin Dong wj-3 and 5, Mr. Song Xin Shu wj 4 and , Mr. Zhang Sheo Hai wj-7 and Mr. Xiang Huan Feng wj-8. The following welding variables of production panel U-ribs were recorded, amperage 672 to 681, voltage 24.7 to 25.1 with a travel speed of 520 mm/min.

After completion of the SAW pass on Production Panel DP042-001, ZPMC personnel performed the SAW pass on DP038-001. The following welders were observed welding production deck plate u-ribs welds, Mr. Chen Jie wj-8, Mr. Xang Jie wj- 7, Mr. Gao Xin Dong wj- 6 and 4, Mr. Song Xin Shu wj 5 and 3, Mr. Zhang Sheo Hai wj-2 and Mr. Xiang Huan Feng wj-1. The following welding variables of production panel U-ribs were recorded, amperage 670 to 685, voltage 24.7 to 25.1 with a travel speed of 520mm/min.

Caltrans QA Inspector McClendon observed the Production Monitoring Test for Production Panel DP037-001 closed rib welds in Bay #1. ZPMC welding personnel performed Gantry Machine Gas Metal Arc Welding (GMAW) for the root pass using gantry machine 2. Dual process WPS-B-T-2342-U1 (U-rib)-3 was posted as the Welding procedure specification for closed rib welding. The following weld joint and welder were recorded for the PMT, weld joint (wj) # 1 Mr. Xu Guo Yin, wj # 2 Mr. Jiang Ting Guango, wj # 3 Mr. Han Chang Hou, wj # 4 Mr. Yuan Feng Chuan, Welding operator was Mr. Zhang Xian Long. The following welding variables of the PMT were recorded, amperage 362 to 375 voltage 29.9 to 30.7 with a travel speed of 526 mm/min.

After completion of the PMT GMAW pass, ZPMC personnel performed the GMAW pass on Production Panel DP037-001. The following welders were observed welding production deck plate u-ribs welds, Mr. Xu Guo Yin wj-1, Mr. Jiang Ting Guango wj- 2, Mr. Han Chang Hou wj-3 and 5, Mr. Yuan Feng Chuan wj 4 and 6. The following welding variables of production panel U-ribs were recorded, amperage 345 to 358, voltage 29.8 to 30.7 with a travel speed of 526 mm/min.

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After completion of the GMAW pass on Production Panel DP037-001, ZPMC personnel performed the SAW pass on Production Panel DP037-001. The following welders were observed welding production deck plate u-ribs welds, Mr. Xu Guo Yin wj-1, Mr. Jiang Ting Guango wj- 2, Mr. Han Chang Hou wj-3 and 5, Mr. Yuan Feng Chuan wj 4 and 6. The following welding variables of production panel U-ribs were recorded, amperage 677 to 682, voltage 24.8 to 25.3 with a travel speed of 510 mm/min.

Caltrans representatives observed rust areas tears and fins on weld joints prior to GMAW welding. Areas were shown to ZPMC personnel prior to welding.

Summary of Conversations:

No relevant conversations spoken on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	McClendon,Timothy	Quality Assurance Inspector
Reviewed By:	Cuellar,Robert	QA Reviewer
